

USA), an independent reference laboratory for the assay of isoflavones. There, isoflavones were extracted within four months of purchase (and before their stated use-by date) from 500 mg of each specimen after dissolution in 70% methanol. Glycosylated and free isoflavones were assayed in duplicate by gradient high-pressure liquid chromatography, with detection of isoflavones at 254 nm using a Waters 996 series photodiode detector with a limit of detection of 0.2 µg/mL. The identity of chromatogram peaks was confirmed by UV-V spectral analysis, and by comparison with standards. The mobile phase was acetonitrile, and adequate peak separation, linearity, accuracy and reproducibility were demonstrated. The total amount of available aglycone isoflavones in each sample was estimated (see Table).

Only two products (Phytolife and Promensil) had total isoflavone contents close to the stated amount, and the content of the Phytolife product was variable. Estimated aglycone contents of preparations demonstrated that glycosylated isoflavones contributed substantially to the stated content of the product. A previous study of isoflavone-containing preparations marketed in the United States produced similar results to ours.¹ Consumers may wish to consider not only whether an alternative therapy is of use, but also whether the product they purchase contains what they expect.

1. Satchell KDR, Brown NM, Desai P, et al. Bioavailability of pure isoflavones in healthy humans and analysis of commercial soy isoflavone supplements. *J Nutr* 2001; 131: 1362S-1375S. □

Screening for gestational diabetes: the time of day is important

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TO THE EDITOR: The 50 g glucose challenge test (GCT) is widely recommended as a screening test for gestational diabetes (GD).¹ The test consists of a 50 g oral glucose load given at any time of the day, followed one hour later by the measurement of the plasma glucose concentration.² This test is recognised as imperfect for screening, as sensitivity and specificity are not 100%.^{2,3} It is known that glucose tolerance deteriorates in the afternoon,⁴ which raises the question of

Screening for gestational diabetes (GD): the effect of screening time

	Time	
	Morning (0930–1200)	Afternoon (1205–1710)
Number screened	176	470
Age in years (mean ± SD)	31.2 ± 4.7	31.7 ± 5.0
Weight (mean ± SD)	59.4 kg ± 10.5 kg	60.8 kg ± 12.9 kg
Family history of diabetes	27	24
Past history of gestational diabetes	1	3
% White/Asian/Middle Eastern	62.6/28.0/9.0	67.5/25.9/5.8
Positive result, 50 g glucose challenge test	30 (17.0%)	146* (31.1%)
Abnormal result, 75 g glucose tolerance test	12 (6.8%)†	46‡ (9.8%)†

* $P < 0.001$, χ^2 . †% Of number screened. ‡ $P = 0.15$, χ^2 .

whether time of day influences the response to the 50 g GCT.

At Royal North Shore Hospital, screening for GD is performed at the 26–28-week visit by means of the 50 g GCT. In 2000, screening for GD was introduced into a morning midwives antenatal clinic, whereas previously it had only been performed in the afternoon. The population attending the clinic at the 26–28-week visit includes many women receiving shared care, and is regarded as being at low obstetric risk.

The Table shows the results of screening at the morning clinic compared with screening in the afternoon over the same time period. The two groups were identical in terms of age, weight, ethnicity, and family history of diabetes or past history of GD. The percentage of women with a positive screening test result during the morning clinic (17.0%) was significantly lower than that during the afternoon clinic (31.1%). Positive screening results were followed up with a diagnostic 75 g glucose tolerance test, and GD was diagnosed according to the Australian Diabetes in Pregnancy Society criteria.⁵ Women with a positive screening test result confirmed with a 75 g glucose tolerance test in the afternoon were less likely to have GD than those with a positive test in the morning (31.5% v 40.0%). Despite the fact that a smaller percentage of women who screened positive in the afternoon had GD, a greater percentage of the total number screened in the afternoon had GD than in the morning group. In this cohort, the difference (9.8% v 6.8%) was not significant (Table; $P = 0.15$).

These results are consistent with the hypothesis that a 50 g GCT test performed in the afternoon results in a greater number of positive results, a greater number of women undergoing diagnostic testing and a greater number of women identified with

GD. The morning GCT appears to increase specificity, with an associated decrease in sensitivity.

These results need to be taken into consideration when designing or implementing a screening program.

1. The Expert Committee on the Diagnosis and Classification of Diabetes Mellitus. Report of the Expert Committee on the Diagnosis and Classification of Diabetes Mellitus. *Diabetes Care* 1997; 20: 1183-1197.
2. American Diabetes Association. Gestational diabetes mellitus. *Diabetes Care* 2001; 24 Suppl 1: S77-S79.
3. McElduff A, Goldring J, Gordon P, Wyndham L. A direct comparison of the measurement of a random plasma glucose and a post-50g glucose load glucose in the detection of gestational diabetes. *Aust N Z J Obstet Gynaecol* 1994; 34: 28-30.
4. Campbell IT, Jarrett RJ, Keen H. Diurnal and seasonal variation in oral glucose tolerance. Studies in the Antarctic. *Diabetologia* 1975; 11: 139-145.
5. Hoffman L, Nolan C, Wilson JD, et al. Gestational diabetes — management guidelines. The Australasian Diabetes in Pregnancy Society. *Med J Aust* 1998; 169: 93-97. □

Changing demographics of cervical carcinoma

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TO THE EDITOR: We have recently noticed changes in the incidence of invasive cervical carcinoma in the Gippsland Health Region and would like to know whether other regions have noticed similar demographic changes.

During 24 months in 1999–2000, 19 women (median age, 59 years; range, 33–88 years) with squamous carcinoma were registered in our pathology practice. Based on information from the Victorian Cervical Cytology Register, almost half (10 women) had no previous cervical smear history whatsoever, while three had had smears, but at irregular intervals up to 14 years apart. The remaining six women had had regular Pap smears, with 1–3 negative